sity of Maryland and an MBA degree from George Washington University. His experience also includes a period as Associate Professor with the American University and President of the Capitol Institute of Technology.

John H. Levergood, Vice President, Communications Products Group, Scientific-Atlanta

Mr. Levergood joined Scientific-Atlanta in 1971 and held several positions in sales and marketing before becoming general manager of the Cable Communications Division in 1974. As general manager he was responsible for division operations including financial, marketing, production, engineering, employee relations and training. The specific marketing area includes cable television equipment consisting of headend, earth station and line distribution equipment. In 1979, Mr. Levergood was made Vice President of the Communications Products Group. He is now reporting to the Office of the President with responsibility for four operating divisions — Energy Management, Video Products, Antenna Products, and Cable Communications. Prior to joining Scientific-Atlanta, Mr. Levergood had five years experience in engineering and marketing roles in related microwave and communications industries. He is a member of SCTE, EIA, the Association of Cable Television Suppliers, and the International Radio & Television Society.

Dr. Elizabeth L. Young, President, Public Service Satellite Consortium, Washington, D.C.

Dr. Young is currently President of the Public Service Satellite Consortium, headquartered in Washington, D.C. with staff and technical facilities in Denver. Prior to her present position she served as Director of the Telecommunications Center at The Ohio State University, as Executive Director of the Kansas Public Television Commission and as Director of Station Relations for National Public Radio. She has held adjunct faculty positions at The Ohio State University and American University. Dr. Young has published in educational and communications journals. She holds degrees in communications and education from Wellesley College, American University, and Columbia University where she was a CBS Foundation Fellow. She is currently on the National Panel of Advisors for the University of Mid-America and has served on the boards of National Public Radio and the National Association of Educational Broadcasters.

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IGC®

- Apparent benefits
- Definition of the scope of the market
- Factors affecting market growth
- Significant trends influencing SatCom architecture
- Competitive environment
- Institutional/regulatory environment
- Global prospects

Monday, April 14, 1980

When you wish — Wake-up (coffee waiting)

8:00 - 8:45 A.M. — Breakfast served

9:00 A.M. — SESSION 2
(Coffee breaks midway through each session)

Satellite Communications in the 80's

- Development of satellite communications
  - — Intelsat
  - — Cable television
  - — Broadcasting by satellite
  - — Pay TV
- Evolution of technology
- Impact on American industry
- Markets being served
- Future applications
- Effect on our future
- Energy's role
- Office of the future

Satellite Distribution Via Small Aperture Terminals

- Development of small aperture terminals
  - — Radio distribution
  - — Datapoint to multipoint distribution
- Assessment of current technologies
  - — Analog
  - — Digital
- Economic criteria underlying distribution of
  - — Radio service programming
  - — Wire service programming
- Impact of FCC deregulation
- Potential problem areas
  - — Installation
  - — Maintenance
- Future trends

12:30 P.M. — Luncheon

2:00 P.M. — SESSION 3

Update on American Satellite All-Digital SDX® Service

- American Satellite all-digital SDX® service/product line summary
- Overview of existing corporate satellite networks
  - — Computer/computer
  - — Digital voice
  - — Digital graphics
  - — Digital video
- Satellite data exchange service — applications in advanced digital networks, 1980-85
- Cryptography and privacy features for advanced satellite systems
- Financial models and "system trade-off studies" for today's satellite-based electronic message systems
  - — The electronic office
  - — Advanced graphic systems
- The outlook for SDX "Inter-Network Exchange Services"
- All-digital SDX services in international applications
- Development/outlook for corporate networks

Business Communications by Satellite: The SBS System

- System overview
- Major components
- Network service
  - — Voice
  - — Data
- Network management
- Initial operational features
- Evolutionary features

Satellite System Leasing

- Business history of satellite development
  - — Experimental
  - — International
  - — U.S./foreign domestic systems
  - — Leased services
- Factors leading to leasing
  - — Technological developments/maturity
  - — Service demand
  - — User base expansion
  - — Financing availability
- Leased systems
  - — Present: LEASAT, U.S. Government
  - — Future
    - U.S. domestic satellite communication systems
    - Environmental systems
    - Direct broadcast systems
    - Foreign domestic systems
    - Regional/shared satellite systems

5:45 P.M. — Cocktails

6:30 P.M. — Dinner

8:00 P.M. — SESSION 4

Continuation of afternoon session if necessary or new additional session if required, or free time for further discussion and relaxation. Alternatively, small rap groups can be organized to discuss specific subjects of choice not adequately covered elsewhere.

Tuesday, April 15, 1980

Wake-up and Breakfast

9:00 A.M. — SESSION 5

NASA Satellite Communications Developments

- Domsat lead to projections of saturation in late 80's
- Best use of new technology, new bands required for effectiveness
- Government role is long-term matching shorter term industry R&D
- Frequency re-use is the most potent solution to greater capacity
- Beam-shaping, on-board switching of primary importance
- Emergency services need better mobile communications
- Remote, unattended terminals needed for ground-based sensing
- Specific area needs being defined, system foreseen
- NASA activity
  - — 30/20 GHz for wideband trunking and customer-premise terminals
  - — Narrowband (voice, record traffic) to small interactive terminals
  - — Eventual use by carriers an integral part of activity plan
  - — Flight project definitions under way; technology RFPs are out

Update on DOD Satellite Communications

- MILSATCOM — user communities
  - — Users requiring high survivability
  - — Wide band, high data rate users
  - — Mobile, small terminal users
- MILSATCOM — user needs
  - — High survivability, both physical and electronic
  - — Wide variation and data rates
  - — Diverse mix of terminal types
  - — Worldwide coverage
- MILSATCOM — trends
  - — Multi-beam satellites
  - — Higher frequency applications
  - — Improved physical survivability
  - — Improved electronic survivability
  - — Affordable earth terminals

12:30 P.M. — Luncheon

(continued)

1:45 P.M. — SESSION 6

The Market for Public Service Applications of Communications Satellites

- Who the users are now
  - The health-care initiatives
  - Local/state/federal governmental agencies
  - Education, libraries, information centers
  - Other prospective users
- Planning for facilities sharing and the implications of earth station deregulation for the public service community
- Services with a future
  - Teleconferencing
  - Continuing professional education
- The economics of public service applications
- New government initiatives and policies in space communications

Conference Summary

4:00 P.M. — Conference Ends: Transportation departs for Monterey Airport.

CONFERENCE LEADERS

Don W. Flora, D. W. Flora and Associates, Manassas, Virginia

Mr. Flora and his associates have been active in the field of telecommunications advisory and consulting for domestic and international applications. By combining experienced technical, marketing, and business resources, his company provides the quick reaction performance essential to matching supplier products/capabilities with customer user needs. D. W. Flora and Associates have been extensively involved in a study to determine the economic viability of aggregating users of distributed information services on both a national and global basis. His company has been exploring how satellite telecommunications might impact or otherwise influence the proliferation of service demands on library resources. Mr. Flora has held positions of senior marketing management responsibility with COMSAT General Corporation and Philco Ford. He is currently consulting to COMSAT General Corporation on D.O.D. satellite communication matters. He has lectured at several universities and symposia on domestic and international telecommunications marketing. Mr. Flora is also President of T^2I (Tempest Technology, Inc.), a Virginia-based firm. He is a member of IEEE, AAS, and AFCEA.

William H. Curry, Jr., Manager of System Definition and Control, Satellite Business Systems, McLean, Virginia

Mr. Curry joined Satellite Business Systems in 1978 and is presently Manager of System Definition and Control. His responsibilities include system configuration control and performance analyses. Mr. Curry is a graduate of the U.S. Naval Academy (Naval Science, 1957), the U.S. Naval Postgraduate School (Communications Engineering, 1967) and Southern Illinois University (MBA, 1977). He served in responsible Navy line positions ashore and afloat, including command. He was an Assistant Professor of Naval Science at the Massachusetts Institute of Technology, and served a one-year sabbatical at Communications Satellite Corporation (COMSAT), where he studied advanced satellite communications engineering, specializing in digital techniques. Mr. Curry was the Navy's first representative to the then (1974) newly founded Military Satellite Communications Office, where he participated in the formulation and publication of the Military Satellite Communications System Architecture. He has authored /co-authored numerous articles and technical papers on communications systems performance, addressing HF, VHF and UHF transmission media, Moon-bounce, and military/commercial satellites.

Donald K. Dement, Manager, Advanced Communications Research and Applications Office, NASA Headquarters, Washington, DC

Mr. Dement began his electronics career in 1955 at the National Security Agency while studying in the cooperative education program at Drexel University. During his tour with the Army Security Agency, he also did graduate work at George Washington University. He was project manager for engineering developments in space communications and electronic warfare data processing during his 20 years with NSA, and he was awarded the USAF and Civilian Meritorious Service Medal for development of a major data processing facility. Mr. Dement transferred to NASA in 1975 as Manager of Advanced Communications Research, providing guidance for technology and applications in satellite communications. He was responsible for deriving strategies, studies, and plans for national policy changes to revitalize the R&D program as Acting Director of Communications during 1978. Mr. Dement is an active member of IEEE, AIAA, and AFSEA.

William Y. Ehrhart, Treasurer and Chief Financial Officer, Hughes Communication Services, Inc., Los Angeles, California

Mr. Ehrhart currently serves as Treasurer and Chief Financial Officer of Hughes Communication Services, Inc., a wholly-owned subsidiary of Hughes Aircraft Company. The subsidiary was formed to develop, market, finance and operate communication systems using satellites built by Hughes' Space and Communications Group. Mr. Ehrhart assumed his present position in April 1979 shortly after the subsidiary was formed. Prior to that, he was with Hughes' Space and Communication Group, and the Industrial Electronics Group. From 1974 until joining Hughes Communication Services, Inc., he held senior financial positions, and from 1970 to 1974 he was Business Manager of the Hughes' U.S. Domestic Satellite Communication project for telephone and cable TV service. Prior to his Hughes' experience, he served in the U.S. Air Force, seeing service in England and France as a pilot. Mr. Ehrhart was an Engineer and Test Director on an experimental Air Force-Atomic Energy Commission satellite project. He earned his Bachelor's Degree in Physics from the University of California Berkeley and an MBA degree with High Distinction from the Harvard Business School.

Robert F. Friedman, President, Satellite Communications Division, California Microwave, Inc., Sunnyvale, California

Mr. Friedman is a Vice President of California Microwave, Inc. and is President of the Company's Satellite Communications Division. He is a Director of BE Industries, a manufacturer of marisat terminals, and a Founder and Director of the Telecommunications General, a Washington, D.C. consulting firm providing service to foreign governments in the field of satellite communications. Mr. Friedman is credited with the innovation of small aperture terminal applications to satellite distribution of radio and wire service point to multipoint services. His company, California Microwave, is the leader in sales to this industry. Mr. Friedman was one of the Founders of American Satellite Corporation and was formerly President of ITT's Aerospace/Optical Division, and Director of Engineering for Aerospace/Ford's WDL Division. He holds the BEE and MSEE degrees from Ohio State University.

Brig. Gen. Harold R. Johnson (USAF Ret), Vice President, Marketing, American Satellite Corporation, Germantown, Maryland

General Johnson is Vice President, Marketing for American Satellite Corporation and has total responsibility for all marketing and sales activities. He directs the development of market studies and analyses to define new business strategies and structures new products and services. General Johnson was previously Vice President for Marketing and Service Development at Western Union Telegraph Company, where he was principally responsible for Market Development of the Westar communications satellite service. In addition, he has held a broad range of executive positions with the communications carrier, including assignments as Group Vice President and President of a wholly-owned subsidiary. During his previous military service, General Johnson commanded the USAF Pacific Communications area. His responsibilities included communications to interconnect the land masses within the Pacific with data, teletype and voice systems, air traffic control systems, and air defense radar. He also served as Deputy Chief of Staff, Communications-Electronics, Pacific Air Forces, responsible for the staff management and direction of all Air Force communications in the Pacific. Earlier, he was assigned for several years to the Executive Office of the President as Assistant Director, Telecommunications Management. General Johnson holds a B.S. degree from the Univer-

SATCOM 80

Purpose: Satellite Telecommunications continues to be one of the most dynamic growth businesses in the world with trend-shattering influence on business decision makers. The exponential increase in the use of Satellite Telecommunications has created on the one hand an economy of scale situation where communications costs have decreased considerably and on the other a much more sophisticated customer-user base as well as the entry of some non-traditional firms on the supply side of the market. Will this trend continue through the 1980's? What are the influencing factors from the perspective of the: Users of services, Purveyors of services, equipment manufacturers and the policy makers? What might be the impact of present and future technology decisions and the rewrite of a 46-year-old communications act on future operating systems? The answers to these and other questions should be foremost in the minds of equipment manufacturers, common carriers, telecommunications service users and policy makers. The purpose of SATCOM 80 is to help provide the answers.

Sessions will be held on the following subjects:

- Overview of the Satellite Communications Business Environment
- Satellite Communications in the 80's
- Satellite Distribution Via Small Aperture Terminals
- Update on American Satellite All-Digital SDX ® Service
- Business Communications by Satellite: The SBS System
- Satellite System Leasing
- NASA Satellite Communications Developments
- Update on DOD Satellite Communications
- The Market for Public Service Applications of Communications Satellites
- Conference Summary

Conference Leaders:

- Don W. Flora, Chairman — D. W. Flora and Associates
- William H. Curry, Jr. — Satellite Business Systems
- Donald K. Dement — NASA
- William Y. Ehrhart — Hughes Communication Services, Inc.
- Robert F. Friedman — California Microwave, Inc.
- Brig. Gen. Harold R. Johnson (USAF Ret.) — American Satellite Corporation
- John H. Levergood — Scientific-Atlanta
- Dr. Elizabeth L. Young — Public Service Satellite Consortium

Attendance: To make IGC conferences more beneficial to those who attend, meetings are held in secluded areas to minimize distractions and registrations are restricted to allow active dialogue and thereby ensure maximum information transfer between participants. The thrust of the meeting is to explore directions, trends, and opportunities so that participants will find the conference an ideal setting to discover what others in this field are thinking, planning and doing. Attendees should greatly benefit from the exchange of hard information and the spirit of open inquiry that form the hallmark of the IGC small group, intensive style of conference.

Fee: $550 ($485 without room) including room, meals, beverages, conference materials and transportation between airport and center (at scheduled times).

Location/Arrival: The Highlands Inn Conference Center is located on the Monterey Peninsula approximately four miles south of Carmel on scenic Highway 1. The Center itself overlooks the ocean, and offers living accommodations and conference facilities blissfully free from all distractions. Participants will find their creature comforts completely and unobtrusively cared for, permitting them total involvement in a stimulating sequence of lectures and discussions. Transportation will be provided from the Monterey Airport to the Highlands Inn for those who notify the IGC office of their specific flight plans. Participants should report to the central information desk near the main entrance.

For Further Information:

Contact —

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PROGRAM

Sunday, April 13, 1980

4:00 — 5:45 P.M. — Arrival and registration at Conference Site (See Arrival Information), time to unpack and familiarize yourself with the site and its surroundings.

5:45 P.M. — Cocktails

7:00 P.M. — Dinner

8:30 P.M. — Introductory session, including a brief orientation on IGC, general introduction of conference participants and subject matter; outline of conference objectives.

9:00 P.M. — SESSION 1

Overview of the Satellite Communications Business Environment

- Dimensions of SatCom systems